

Date: Tuesday, 03/02/2009 8:30:27 AM
 User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services
 Job Number : 45436 *4*
 Estimate Number : 12364
 P.O. Number :
 This Issue : 03/02/2009 S.O. No. :
 Prsht Rev. : NC
 First Issue : // Type : LARGE FAB ASSY
 Previous Run : 45434
 Written By :
 Checked & Approved By :
 Comment : Est Rev:A New Issue 06-04-11 JLM
 Est Rev:B 08-01-24 change rivet to CR1122-3-025 DD
 verified by:EC

Drawing Name : TAIL LIGHT FAIRING *Split*
 Part Number : D3484042
 Drawing Number : D3484 REV E
 Project Number : N/A
 Drawing Revision :
 Material :
 Due Date : 28/02/2009 Qty: 15 Um: Each *8/10*

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PG PURCHASING



Comment: PURCHASING

ISSUE P.O. 8120

possible supplier: GFI

D3484-042 INCLUDES D3484-2, D3484-4, D3484-6

FORMED AND WELDED, *PER DISCUS*

CHEMICAL CONVERSION, NUTPLATES AND

POWDER COATING TO BE DONE AT DART

*09/02/03**(15)*

2.0 D3484042P Tail Light Fairing Assembly, RH

Comment: Qty.: 1.0000 Each(s)/Unit Total : 15.0000 Each(s)
Tail Light Fairing Assembly, RH

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

RECEIVE AND INSPECT FOR TRANIST DAMAGE
ENSURE MAT'L CERTIFICATION ATTACHED

4.0 QC9 VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

*09/03/20**(16)**P10**09-03-23*

W/O: 45436

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	App. QC Insp.

Part No: D3484-042 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR: 45436

WORK ORDER NON-CONFORMANCE (NCR)

DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
9/3/23	# 40	During walking inspection Qty (74) parts need a welding touch up.		Do welding touch ups as per Q55004	BE 09/03/23	S 9/3/31		
090331	S.C	Upon inspection, it was noticed that 6061-TO material was used. R.C.		In from GFI of Problem Material is acceptable per attached e-mail. - Dwg will be updated. - Determine rectification from GFI as to why 6061-TO was used, & submit a written rect cause.	see Attached E-mail Last page			

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TAIL LIGHT FAIRING

Job Number: 45436

Part Number: D3484042

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

S 02/03/31

(P70)
Previous

6.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

F2 09/03/31

(K)

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

bK 09-03-31

(K)

8.0

CR1122 3 025

RIVET



Comment: Qty.: 4.0000 Each(s)/Unit Total: 60.0000 Each(s)

Rivet

Batch: M111102

S 09/03/31

(K)

9.0

MS2106904

ANCHOR NUT



Comment: Qty.: 2.0000 Each(s)/Unit Total: 30.0000 Each(s)

ANCHOR NUT

Batch: M110916

S 09/03/31

(K)

10.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

1-Install Nut Plates as per Dwg D3484

S 09/03/31

(K)

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/03/31

(X10)

-012

12.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

START TIME:

14:05

OVEN TEMPERATURE:

320°

FINISH TIME:

14:35

Cmpd bK

09/03/31

(X10)

Job Number: 45436

Part Number: D3484042

Seq. #:

Machine Or Operation:

Description:

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION

0412

Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

14.0

PACKAGING 1

PACKAGING RESOURCE #1

Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

Identify on inside surface as indicated

TCCA-PDA, DART AEROSPACE LTD

P/N: D412-750-141 B/N: BXXXXX

FOR PRODUCT ELIGIBILITY SEE PDA06-13

9/4/11 50

10x

15.0

QC5

INSPECT WORK TO CURRENT STEP

042

Comment: INSPECT WORK TO CURRENT STEP

16.0

QC21

FINAL INSPECTION/W/O RELEASE

Comment: FINAL INSPECTION/W/O RELEASE

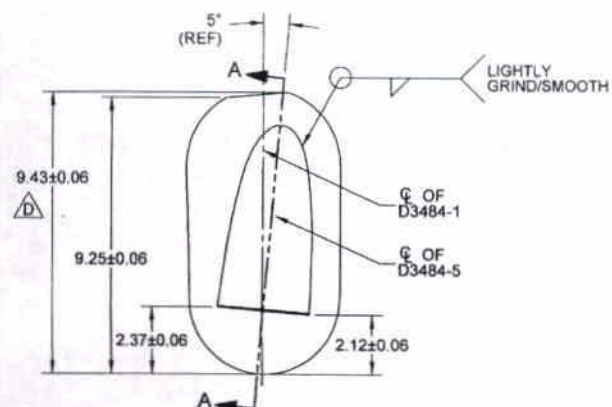
09/04/01

Job Completion

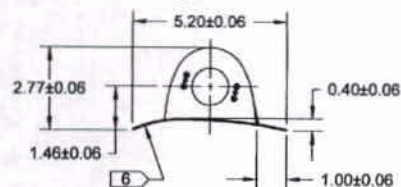
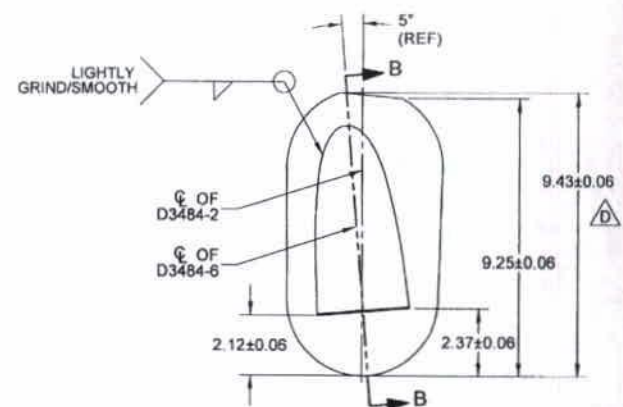
U 09.04.01

Form: rprocess

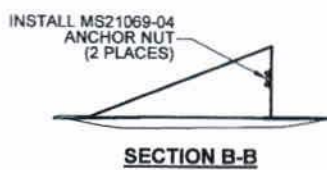
W/O 45436



QTY -041	QTY -042	P/N	DESCRIPTION
X		D3484-041	TAIL LIGHT FAIRING ASSEMBLY (LH)
	X	D3484-042	TAIL LIGHT FAIRING ASSEMBLY (RH)
1		D3484-1	BASE (LH)
	1	D3484-2	BASE (RH)
1		D3484-3	FACE (LH)
	1	D3484-4	FACE (RH)
1		D3484-5	CONE (LH)
	1	D3484-6	CONE (RH)
4		CR1122-3-02.5	RIVET
2		MS21069-04	ANCHOR NUT



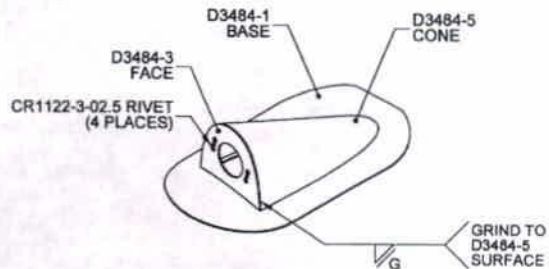
SECTION A-A



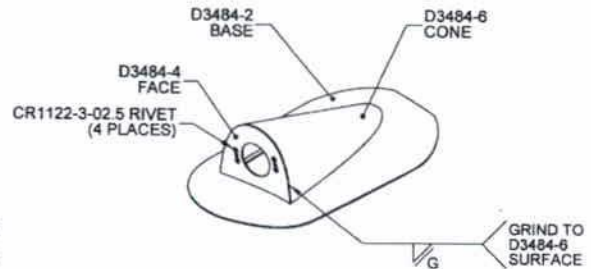
SECTION B-B

D3484-041 TAIL LIGHT FAIRING

D3484-042 TAIL LIGHT FAIRING



D3484-041 ISOMETRIC VIEW



D3484-042 ISOMETRIC VIEW

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) WELDING: PER DART QSI 004
 - 6) IDENTIFICATION: IDENTIFY ON INSIDE SURFACE AS INDICATED WITH WHITE LABEL: "TCCA-PDA, DART AEROSPACE LTD., P/N D412-750-141/-142 B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA06-13"
 - 7) WEIGHT: 0.30 lbs

REV.	DESCRIPTION	BY	DATE
E	REDRAWN/REFORMAT TO SHOW LH AND RH CONFIGURATIONS FOR CLARITY. CORRECT VIEWS ON SHEET 3 & 4 (WAS SHOWING MIRROR IMAGE OF PARTS); DIM 1.560 WAS 1.563 (SHEET 3, ZONE B4), CR1122-3-02.5 RIVET WAS MS20426AD3-3 RIVET	MB	08.01.03
D	CORRECT D3484-1F	MB	06.06.22
C	RE-DESIGN D3484-3F/-5F	MB	06.04.20
B	RE-DESIGN	MB	06.02.21
A	NEW ISSUE	MB	05.11.29

DESIGN	DATE	08.01.03
DRAWN		
CHECKED		
MFG. APPR.		
APPROVED		
DE APPR.		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D3484	REV. E
TITLE TAIL LIGHT FAIRING	SHEET 1 OF 4
SCALE 1:1	

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180 AVENUE LABROSSE
POINTE-CLAIRE, QUÉ., CANADA H9R 1A1
TÉL.: (514) 630-4877 - FAX: (514) 630-4849

une division de Thomas & Betts Fabrication Inc. / GFI is a division of Thomas & Betts Manufacturing Inc.

ACHAT / SOLD TO



BON DE LIVRAISON - SHIPPING MEMO

DATE DE LIVRAISON SHIPPING DATE	N° BON DE LIVRAISON SHIPPING MEMO NO.
2009/03/19	0415753

EXPÉDIÉ À / SHIPPED TO

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON, K6A 1K7

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON, K6A 1K7

CODE DE CLIENT CUSTOMER CODE	N° DE CONTRAT JOB NO.	N° COMMANDE PO NO.	VIA SHIP VIA
DART GFI-0299	J0197209	PO00008120	

QUANTITÉ QUANTITY	VOTRE N° DE PIÈCE YOUR PART NO.	DESCRIPTION
16	D3484042P	TAIL LIGHT FAIRING CERTIFICATE OF CONFORMANCE REQ

TOUTES LES RÉCLAMATIONS DOIVENT ÊTRE FAITES EN DEDANS DE 5 JOURS DE LA RÉCEPTION
ALL CLAIMS MUST BE MADE WITHIN 5 DAYS OF RECEIPT OF GOODS

RECU PAR / RECEIVED BY

**CERTIFICATE OF COMPLIANCE
CERTIFICAT DE CONFORMITE**



Membre de / A Member of **Thomas & Betts**

180 LABROSSE AVENUE
POINTE CLAIRE, QC
H9R 1A1

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7

CERTIFICATE NO.	1	OUR JOB NO	J0197209	SHIPPING MEMO	0415753	
ITEM	QUANTITY	PURCHASE ORDER	PART NUMBER	REV	NAME	DWG ISSUE
-	16 PCS	PO00008120	D3484042P	E	TAIL LIGHT FAIRING	E
MATERIAL		SUPPLIED BY		MAT. REL. NO.		
AL 6061-T0 (QQ-A-250/11)		SAMUEL / ALCOA INC		564405		
	PROCESS	PROCESSOR	RELEASE NOTE #			
1	FIRST ARTICLE INSPECTION REPORT ON FILE	GFI	CONFORMS			
2						
3						
4						
5						
6						
7						
8						
9						

WE HEREBY CERTIFY ALL THE PARTS COVERED BY THIS CERTIFICATE HAVE BEEN MANUFACTURED FROM MATERIAL SUPPLIED ON RELEASE NOTE SHOWN ABOVE AND THAT ALL PARTS HAVE BEEN INDIVIDUALLY INSPECTED AND CONFORM TO THE DRAWINGS AND PURCHASE ORDER REFERENCED ABOVE.

DATE **19 MARCH 2009**

G.F.I. Q.C. REP.

Calvin Hart





Programme d'Assurance Qualité Enregistré / Registered Q.A. Program
ISO 9001:2000 AS9100

LETTRE DE CONFORMITÉ --LETTER OF COMPLIANCE

Date: 20 JANVIER 2009

Company Name: G.F.I. Division of Thomas & Betts limited
Address: 180 avenue Labrosse
City: Pointe Claire, Qué.
Zip Code: H9R 1A1

du client: 0075046
Customer's order #:

de commande SSMQ: 021908
SSMQ's Order #:

La présente est pour certifier que le matériel détaillé ci-dessous est conforme aux exigences de votre commande et des normes du grade tel que décrit:

The following is to certify that the material listed below meets your order requirements and grade standards as described:

Notre/Our Item #	# de pièces/ # of pieces	Épaisseur/Grandeur Gauge/Size	Alliage/Trempe Alloy/Temper	Spécification / Specification	Lot/Heat
1	1	.050" X 48" X 144"	6061-0	AMS-QQ-A-250/11	564405

Bien à vous,
Yours truly,



Nicole Griffiths

Commis à l'administration.
Administration Clerk.

CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

Ship From: PINEBLADE, IA

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Mark J. Vrabec

Mark J. Vrabec
Director of Manufacturing Davenport Works

Kenton P. Young

Kenton P. Young
Quality Assurance Manager

924669
Ship Date

0
B.L. No.

Invoice No.

Alcoa No. Item

Page 1

2008-05-30

2963186

00000

5043842-2

P.O. No./Govt Contract No.

Customer

Mfg Order

N20720

SAMUEL SON & CO LT DCE-43842-2

Ship To: SAMUEL SON & CO LTD

S.S.M.Q

21525 CLARKE-GRAHAM

BAIE D'URFE H9X 3T5 QC

Item Description

0.05 IN TK (+0.0000 -.0035) X 48.0 IN W (+.125 -
.125) X 144.0 IN LN (+.15625 -.15625) (N) A/T 6061-
O FLAT SHEET FOR DISTRIBUTORS TOLERANCE GUARANTEED. AMS-QQ-A-
250/11 EXC_MRK AMS4025 REV K EXC_MRK
ASTMB209 REV 07 EXC_MRK CMMPO25 REV Q EXC_MRK
CMMPO19 REV D EXC_MRK CSTI008 REV D
((MARKED)) KRAFT PAPER INTERLEAVED
MAX GROSS SKID WGT: 6000 LB QUAN TOL +0
-30 % CQR 0216075 REV 01 CUST REQ 08-03-
01 *** W/E 08-04-05 ***

Num	Package Ticket	Lot	Weight	Quantity	UOM	Pc Id/Serl
1	623928	564405	4317	132	PC	

Notes for CQR: 0216075.1

PRODUCT PRODUCED AND MARKED TO THE REQUIREMENTS OF AMS-QQ- A-250/11 ALSO MEETS THE REQUIREMENTS OF QQ-A-250/11F. PROD UCT
PRODUCED AND MARKED TO THE REQUIREMENTS OF QQ-A-250/11 F ALSO MEETS THE REQUIREMENTS OF AMS-QQ-A-250/11.

Exception to Spec CMMPO25 ; Revsn: Q Issue: Letter dated 2004-08-24 from STEGEMANN, JEAN to BLACKIE, B.

Exception to Spec CMMPO19 ; Revsn: D Issue: Letter dated 2006-09-28 from AHERN, DENNIS T to BLACKIE, BILL

Exception to Spec CSTI008 ; Revsn: D Issue: Letter dated 2006-12-04 from AHERN, DENNIS T to BLACKIE, BILL

CQR: 0216075.1 -Specification Limits

Temp	Dir	Long Transv.	Max	Min	UTS KSI	TYS KSI	EL4D PCT
0			22.0	12.0			16
Temp	Dir	Long Transv.	Max	Min	UTS KSI	TYS KSI	EL4D PCT
T42			30.0	14.0			16
Temp	Dir	Long Transv.	Max	Min	UTS KSI	TYS KSI	EL4D PCT
T62			42.0	35.0			10



CERTIFIED INSPECTION REPORT

Alcoa Inc.

PITTSBURGH, PA DAVENPORT WORKS

Ship From: PITTSBURGH, PA

We hereby certify that the material covered by this certificate has been inspected with, and has been found to meet, the applicable requirements described therein, including any specifications forming a part of the description and that samples representative of the material met the composition limits and had the mechanical properties shown on the face of this sheet.

Mark J. Vrabec

Mark J. Vrabec
Director of Manufacturing Davenport Works

Kenton P. Young

Kenton P. Young
Quality Assurance Manager

924669
Ship Date

B.L. No.

Invoice No.

Alcoa No. Item

Page 2

2008-05-30

2963186

00000

5043842-2

P.O. No./Govt Contract No.

Customer

Mfg Order

N20720

SAMUEL SON & CO LT DCE-43842-2

CQR: 0216075.1 -Specification Limits (cont.)

Chemical Composition		SI	FE	CU	MN	MG	CR	ZN	TI	Other Each	Other Total
Alloy 6061	Max	0.8	0.7	0.40	0.15	1.2	0.35	0.25	0.15	0.05	0.15
Lot: 564405	Min	0.40	0.15	0.8	0.04						REMAIN

Mechanical, Physical, Metallography, Quantometer Results

Temp	Dir	No. of Test	UTS	TYS	EL4D
0	Long Transv.	2	17.8	8	25.8
			18	7.8	24.8
			UTS	TYS	EL4D
Temp	Dir	No. of Test	KSI	KSI	PCT
T42	Long Transv.	2	36.5	18	23.3
			36.6	18.1	21.9
			UTS	TYS	EL4D
Temp	Dir	No. of Test	KSI	KSI	PCT
T62	Long Transv.	2	50.8	43.8	13.3
			50.7	43.7	13

Cast Number	Chemical	SI	FE	CU	MN	MG	CR	ZN	TI
H3204064	Actuals	0.65	0.4	0.26	0.05	1.0	0.19	0.03	0.02

This material was melted in the United States or a Qualifying Country [REF DFARS 225.872.1(a)]; it was manufactured in the United States

Jason Murdoch

From: Bill Beckett [bbeckett@dartaero.com]
Sent: March 31, 2009 6:30 AM
To: 'Jason Murdoch'
Subject: FW: Tail Light Fairing
Attachments: DSCN7274.JPG

From: David Shepherd [mailto:dshepherd@dartaero.com]
Sent: March 30, 2009 6:04 PM
To: 'Bill Beckett'
Cc: 'Mike Petsche'; 'L Lacelle'; 'Bgolden'; 'Harvey Siemens'
Subject: Tail Light Fairing

No virus found in this outgoing message.

Checked by AVG.

Version: 7.5.557 / Virus Database: 270.11.32/2030 - Release Date: 3/30/2009 8:40 AM

31/03/2009

Chantal Lavoie

From: Pedro Mendez [Pedro.Mendez@tnb.com]
Sent: March 31, 2009 1:21 PM
To: Chantal Lavoie
Subject: Re: D3484-041

Hi Chantal

We didn't change any material we follow the process
the drawing specify 6061 T6 OR (optional 6061 T62 heat treat) we made at T0 for transfer to T62
after

According to form of the part the only way to fabricate are the optional material

Regards Pedro

Pedro Mendez
Représentant technique
Technical Sales Representative



180 Avenue Labrosse, Pointe-Claire
Quebec, Canada H9R 1A1

☎ (514) 630-4877

📠 (514) 630-4849

Email: pedro.mendez@tnb.com

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<http://groupwise.tnb.com/disclaimer/>

>>> "Chantal Lavoie" <clavoie@dartaero.com> 3/31/2009 11:40 AM >>>

Pedro. Could you please advise why you change the material for the tail light fairing. Please send me the
explanation by e-mail.

Thanks

Chantal